

Application No.: 10/797890

Case No.: 59474US002

REMARKS

Claims 1-20 are pending. Applicants respectfully requests reconsideration of claims 1-20 in view of the following remarks.

1. Claims 1-8 and 13-20 are Novel in vlew of Sun et al.

Claims 1-8 and 13-20 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Sun et al. (U.S. Publication 2004/0053460A1). Applicants request reconsideration of this rejection because Sun et al. do not teach or suggest a conditioning tool with an abrasive surface that is electrically insulated.

Sun et al. reports a method and apparatus for electrochemically assisted CMP using a dielectric insert positioned between the counter-electrode and the substrate (paragraph [0012]). The dielectric insert has a plurality of zones, each zone permitting a separate current density between the counter-electrode and the substrate (paragraph [0012]). Sun et al. report that the polishing uniformity of an ECMP process may be improved by selectively adjusting the current density between the substrate and specific zones of the electrode (paragraph [0105]).

Sun et al. is not concerned with the electrical properties of the conditioning tool. As reported in the Office Action, Sun et al. limited mention of conditioning tools and associated apparatus may be found in FIG. 1B, items 250-258, and in paragraph [0099]. The Office Action interprets Sun et al. to disclose that the conditioning pad is isolated from the electrodes by the polycarbonate pad disclosed in paragraph [0078]. Applicants disagree.

The dielectric material used in the "body 406" of the "conductive pad 400" reported by Sun et al. does not isolate the polishing surface 402 from electrical current. Rather, the dielectric material divides the conductive pad into zones. The body 406 is permeable to the electrolyte that flows through the conductive pad 400. During use, the electrolyte contacts the substrate being polished. This is consistent with the electrical path from the electrical source to the workpiece described by Applicants at, for example, paragraph [0022]. Accordingly, the polishing surface 402 reported by Sun et al. is not isolated from electrical current.

Further, since the conditioning element 258 contacts the pad assembly 222, (paragraph [0099]), including any electrolyte present, the conditioning element is not insulated from the conductive pad. Accordingly, Sun et al. do not teach or suggest a conditioning tool with an abrasive surface that is electrically insulated. Applicants respectfully request that the rejection of

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claims 1-8 and 13-20 under 35 U.S.C. § 102(e) as allegedly being anticipated by Sun et al. be withdrawn.

II. Claims 9-12 are Not Obvious in view of Sun et al.

Claims 9-12 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious in view of Sun et al. Applicants request reconsideration of this rejection because, as discussed above, Sun et al. do not teach or suggest a conditioning tool with an abrasive surface that is electrically insulated. For at least this reason, the rejection of claims 9-12 for alleged obviousness over Sun et al. should be withdrawn.

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CONCLUSION

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application is requested. The Examiner is invited to contact Applicants' undersigned representative with any questions concerning the present application.

Respectfully submitted,

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